

5 September 1987

Bernand, Lau, Dome, Jugah, JBS.

35 ml N. Bintulu W of Miri
Road, c. 1 mile

Similajau Forest Reserve.

logging concession S.P.1

Alt 100m, $3^{\circ}20'N$, $113^{\circ}25'E$ Lowland mixed Dipterocarp f.
on yellow clay225 Myristicaceae
Myristica iners Bl

Tree 20m 45 cm dbh

Bark smooth, flaky; buttressed on
under bark red. 2 cm thick

large reddish lenticels

Flowers P(3), orange, paniculate

TBK, TW, LF (3)

226

MYRISTICACEAE

Knema ? *peruviana*

Tree 18 m x 35 cm dbh
 Fluted base to 2 m
 Bark reddish, very flaky
 turning black
 Underbark red, 1 cm thick

Flowers axillary clusters in
 bracts with dense reddish tomentum
 p 3, woody - hirsute reddish
 brown

TBH, TW, LF. (3)

227

RUBIACEAE *Randia*

Tree 15 m x 25 cm dbh
 fluted to 1 m
 bark gray, powdery, thin < 5 mm
 easily peeled
 Fruits green 32 mm x 35 mm

ovoid, inferior, smooth.

TBK, TW, LF. (3)

228 DIPTEROCARPACEAE

Vatica

Tree 25m x 50cm dbh.
 bark smooth, greenish gray.
 1 cm thick, fine longitudinal fissures
 with few flat lenticles
 u/bark red, wood yellow.

flower P5, 5-7 mm dia.
 reddish-brown tomentum

TBK TW LF (3)

229 EBENACEAE

Diospyros

Tree
 20m x 40 cm dbh

bark. , black / brown / silver , rough
longit fissures flaking.
0.5 - 1.0 cm thick
w/bark reddish , wood whitish

Fruit (TB) ? spheroid , 30 ^{dia} mm
brown/red tan exterior

TBK , TW , LF , FR (4)

230 BURSERACEAE
Dacryodes.

Tree 15 m x 20 cm dbh
bark whitish grey , soft
longitudinal fissures thin ~ 5 mm

Flowers small (1-2 mm) white

TBK , TW , LF (3)

See 240 herb ground

231 Ulinaceae Gironniera

Tree 20 m x 25 cm dbh

bark, smooth, greenish-grey
waxy, 5 mm thick, w/bk orange.Fruit, orange, ovoid
two styles

TBK, TW, LF (FR) (4)

Annonaceae Polyalthia

232 Tree 15 m x 25 cm dbh
fluted at base - 2 mOuter bark corky, brown, fissured,
inner bark yellowish with black
longitudinal, raised markings, pale
thick, > 1 cm, u/bk orange~ 10 fine carpels 25 x 15 mm
ovoid, pink with red streaks
longitudinal

TBK, TW, LF, FR. (4)

233

Annouriteinte

Mezzotru

Tree 20m x 90 cm dbh

Bark, thick - 2 cm reddish

Longit. fissures

Fruits ovoid 55 x 50 mm

shghtly flattened length

smooth green,

TBR, LF, TW,

(3)

*

Gibbons, 'barking deer'
'peacock' (heard)

6 Sept. 87

234

MORACEAE

Artocarpus odoratissimus

Tree 15m x 30cm dbh

Bark, brown, thick (15mm)
roughly pock-marked & fissured

Fruit dull orange 10cm dia

Seeds bright orange 15mm long

TBK, LF., TW, FR(4)

235

FAGACEAE

Castanopsis

Tree 25m x 80cm dbh

buttressed to 2m

bark grey, flaky, vertical
lines of brown lenticels

Fruit , hard 4cm dia green

TBH , LF , TW , FR(4)

236

MYRISTICACEAE

Thesia

Tree 20m x 30cm

Bark reddish brown 5-10 mm
dark red exudate
flaky

Flower P(3)

reddish - brown tomentum

-

TBH , LF , TW. (3)

237

Anacardiaceae.

(?) *Alhuta*

(Toxic) 'Rengas'

Tree 30 m x 50 cm dbh
bark smooth grey, longitud
fissures

ulb red wood white

Flower greeny-white

Fruit 5 winged (60 mm long)
Fr. ovoid 1.5 m long

TBK, TW, LF, (3)

238

BOMBACACEAE

Durio

Tree 25 m x 45 cm dbh

bark rough, reddish brown

longitud fissures, 1 cm thick

ulb reddish.

Frnt, spines ~ 1.5m

Fr. 12cm long (dial)
orangy
and red.

FR, TBK, LF, TW (4)

239

SAPINDACEAE

Nephelium lappaceum L.

Rambutan

Tree 10m x 20cm dbh
bark reddish brown with small
flakes and tubercles
thin < 5mm, ubk orangy/red

frnt 3cm dia
soft spines ~ 1.5m
pinkish red

TBK, TW, FR, LF, (4)

240

BURSERACEAE

Dacryodes (cf 230)

FR, pink-red

241

MORACEAE

Artocarpus ambocephalus

Mentawai

Tree 25-30 m x 40 cm
buttressed to 1 mbark corky, reddish-brown.
u/bk spongy yellow,
thick white exudateFr. Orange - 15 cm diam
pithy
seed with orange aril

TBK, LF, TW, FR. (4)

242

MYRISTICACEAE

Horsfieldia

Tree 30 m+ x 35 cm dbh

bark reddish brown
7 cm thick longitudinal grooves
- thick flaking scales
u/bk brown, red exudate

Fruit orange, round - 35 mm long

TOH, LF, TW (3)

243

EUPHORBACEAE

Baccaurea

Tree 10m x 15 cm dbh

bark greenish grey,

soft peeling longitudinal stripes

thin, papery, dry.

fruit: flattened spheroid, pink
3 groove 25 mm dia

seed with bright black aril

LF, TW, FR (3)

7 SEPT. 87.

244 Tree 10 m x 15 cm dbh
 bark smooth with vertical cracks
 greenish-grey u/b orange, 10 mm thick

Fruit 7-8 free carpels
 ovoid 40 x 25 mm, ± 10 mm stalk
 pubescent, orange

ANNONACEAE
 ? *Mitrophan*

TBK, TW, LF, FR (4)

245 Tree, 20 m x 40 cm dbh
 fluted to 1 m

bark with many longit. flut-
 ting ridges grey-brown
 u/bk red 7 mm thick
 wood yellow
 Fruit reddish brown, tuberculate
 hard, wood, 3.5 m long

ROSACEAE *Parinari*

TBK, TW, LF, FR (4)

246. MORACEAE

Artocarpus integer

Tree 15-20 m x 35cm dbh

outer bark rough, brown, long
ridges - flakes
inner bark red
under bark orangy
white latex exudate

Fruit cauliflorous, oblong

20 x 10 cm

seeds with yellow pulp and

TBk, TW, LF, FR (4)

247 BOMBACACEAE

Durio

Tree 30m ± x 6.5cm dbh

buttressed to 1-2m

bark reddish-brown, rough

tuberculate outer band
 corky, flaking
 w/bk, red, fibrous, wood reddish.

Fruits up to 10 cm long
 spherical
 and yellow pulp.

TBK, TW, LF, FR (4)

*
 248 PANORAWACATE

Fraxamethia

5 m climbing up Duroc sp
 Infls reddish brown

HERB.

249

FAGACEAE

Castanopsis

Tree 12-15 m x 45 cm dbh
 fluted to 1.5 m
 bark reddish-brown flaking
 5 mm thick, u/bark reddish
 fruit, abundant, mid-green

FR, LF, TW, TBK (4)

250

SAPINDACEAE

Pometia

Tree 30 m x 40 cm dbh
 buttressed to 1.5 m
 Bark smooth gray, < 5 mm,
 reddish u/bk. rugose

fruit, rusty brown (tan) green
 ovoid, 12 mm long

FR TBK, TW, LF (4)

251 MELIACEAE

Tree 30m x 35cm dbh

bark brown (reddish)
10mm thick smooth - powderyufbk red
white latex
wood red.flower small c 1cm dia bud
on rusty firmose pedicel
yellow-green.

TBH, TW, LF, FL. (4)

252

FAGACEAE
*Lithocarpus*Tree, 35m x 60cm
~~# buttressed 1.5m.~~bark grey, rough, tuberculate
ufbk red 16mm thick

Fruit green, 15 mm dia
dull green

TBK, TW, LF, FR (A)

253

DIPTERO CARPALEAE

Dipterocarpaceae

Tree ~ 40m x 50cm dbh

butrressed to 1m

bark ^{+ smooth}, reddish-brown

large (~1cm dia) corky

lenticels, slightly flaky.

Fruit 2 winged seed

30mm dia, 5 bumps

150mm, red

3 @ 5mm

TBK, TW, LF, FR (A)

8 SEPT. 1987

254

Nephelepis

Tree 10 m x 15 cm dbh

Bark smooth, grey

Fruit 5 cm long, red

TBK, TW, LF, FR (4)

255

ULMACEAE

Cannoniera

Tree 15 m x 25 cm dbh

Bark light brown, tuberculate
with transverse ridges, 6 mm

thick

Fruit oval, 12 mm long

2 styles to 15 mm long

dull orange above

TBK, TW, LF, FR (4)

256

LEGUMINOSAE

Dalmania indum var. *hirsuta*Tree 35m x 45 cm dbh
buttressed to 1.5mBark reddish-brown, tuberculate
u/bark red. 5-7mm thick
wood red-orange-red
bright red exudateFruit obovoid 23 mm long
x 16 mm dia, dark brown
tomentose

TBH, TW, LF, FR (4)

257

FAGACEAE

*Lithocarpus*Tree 35m x 80 cm dbh
buttressed to 1.5-2mo/bark rough, longit fissures & flaking
i/bark red u/bark orangey
* grey-brown 15cm

Fruit grey-green 40 mm dia
silky texture

TBK, TW, LF, FR (4)

258 TILIACEAE

Pentace

Tree 35-40 m x 45 cm dbh
Barkred to 1 m

Bark reddish brown / outer 1/6
corky, flaking w/bk red.
wood orange-red

Fruits 5 winged red.

Flowers white 5 mm dia
dia. 10 mm
~~corolla~~

TBK, TW, LF (3)

259

DILLENIACEAE

Tree 20m x 35cm dbh
 Outer bark brown, flaking, lentic
 fissures; inner bark red
 under/bark yellow, wood dark
 red.

Flower 5 ^{sepal} ^{deep} red, P 5
 imbricate red outer, yellow
 inner 50mm dia, fragrant
 yellow; stamens
 purple stamens
 red 7-lobed style

TBK, TW, LF, FL. (4)

260

DIPTEROCARPACEAE

Shorea

Tree 35m x 40cm dbh
 buttressed to 1.5m

Bark smooth, red-brown
with lenticles, longitudinal grooves
u/bk orangy yellow, 10 mm thick

Fr 3 long ^{10mm} 2 short ^{5mm} wings
green - orangy, fine tomentum
8-10 mm dia spherical

TBH, TW, LF, FR (4)

261 *

1
Discidium

HERB

m 259 - ant plant
yellow runners, w fronds
3-4 cm - pod with silky
seeds, small (1mm dia) yellow

262

FALGACIACEAE

Lithocarpus

Tree 35 m x 50 cm dbh

bark used to 1 m

Bark rough, grey-brown

tuberculate ^{as} small flakes

15 mm thick

u/bk red, wood red

Fronds ^{green} green, silky
conical 10-12 mm dia

TBH, TW, LF, FR (4)

263

EUPHORBACEAE

Baccania angulata

Tree 10 m x 20 cm dbh

Bark soft ^{woody} 10 mm thick

silver outer, yellow under / 4

Frut 6-sided, waxy

candle-wax red, canylos
oro

TBH, TW, LF, FR, (4)

10 SEPT. 1987

264

LAURACEAE

cf Phoebe

Tree 15-20 m x 40 cm dbh.

Bark, brown, soft, flaking
u/bk orange 10 mm thick
wood yellow

Flower buds greenish yellow.

3-4 mm dia.

LF, TW, TBH. (3)

265

LEGUMINOSAE

Dialia

Tree 35 m x 70 cm dbh.

buttressed to 3 m.

Bark, silver-gray, scabrid;
+ smooth wood yellow.
u/bk red, red exudate

Fruit 50 x 30 cm
oval, pointed, black

TBK, LF, TW, FR (4)

266

VITACEAE

Columela

W. Climber to 5 m on tree
bines to 10 mm dia.

black when ripe

Leaf → tendrils

Flower P + green, yellow disc
2°, Forest margin of road

LF + TW, FR, STM (BK + WD)
(3)

267

FAGACEAE

Lithocarpus

Tree 30 m x 35 cm dbh
buttressed to 1 m

Bark grey to brown,
 smooth with longitudinal
 rows of raised lenticels
 u/bark orange-red, 6 mm thick
 wood whitish - pale orange
 fruit ovoid, apiculate
smooth green, glabrous
 20mm x 16 dia.

LF, TBH, TW, FR (4)

268 LOGANIACEAE

Strychnos

W. Chin. bean, stem 2.5 cm
 fruit to 8 cm, green
 obovoid

FR, LF, TW (4)
 SE+SW

Toxic - blue juice

269

MYRISTICACEAE

Myristicium

Tree 35m x 45cm dbh
 Trunk fluted / buttressed to
 1.5m; Bark dark brown
 flaky +++ 15mm thick
 u/bk. red, with red
 exudate Wood orange-red

Fruit oval 40mm x 30mm
 orange, fissile

TBK, LF, TW, FR (4)

270

APOCYNACEAE

Willughbeia

Woody climber to 15m
 on tree stem to 50 mm dia
 Fruit 8 cm dia, spheroid, orange

edible pulp. around seeds.
milky white latex

STM, TW, LF, FR (4)

271

~~DILLENIACEAE~~ ?

FLACOURTIACEAE

? *Dillenia*

Tree 20m x 20cm dbh

Bark grey, slightly

rough + flaky

u/bk orange 4mm thick

wood yellow - orange

Flower ♂ white

A ♂ white, filaments

very branched hairs

anthers brown

TRK, TW, LF, FL (4)

272

ARUNACHAL PRADESH

Fissistigma

Woody climber - 5m
stem - 30 mm dia

hooked tendrils

fruits 2-5 free carpels
green 30 x 20 mm axill.

STM, TW, LF, FR (4)

(33)

11 SEP 87

273 FLACOURTIACEAE

Hydrocaryus

Tree 35 m x 45 cm dbh
 Bark grey smooth, 10 mm thick
 Fruits spheroid 130 mm dia
 velvety dark brown tomentum

TBT, TW, LF, FR (4)

274 OLACIACEAE

Ochama stackys

Tree 35 m x 65 cm dbh
 Trunk buttressed \approx 2m
 Bark, light reddish brown
 smooth or \pm scabrid.

Fruits 3.0 mm dia spherical
meas carp with milky latex

TBIF, TW, LF, FR, (4)

275

URTICACEAE

Psikio sp.

Epiphyte

Shrubby 2m x

Flowers on pink receptacle
minute white perianth

TW, LF, FL. (3)

276

MYRISTICACEAE

Myristica

Tree 25m x 30cm dbh
Bark dark brown, flaking
up bk red with red exudate
14mm thick

wood reddish.

Fruit ovoid 90 x 60 mm
 greenish, ^{yellow,} → orange when ripe

TBK, TW, LF FR (4)

277

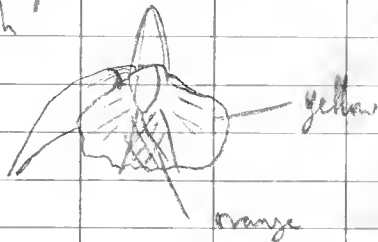
ZINGIBERACEAE

Ochasma / Anomum

Stm to Fr, lvs compound

Fruit oblong 20 x 15 mm
 orange. (yellow)

Flowers, on spikes from
 base of plant = 20 mm long
 yellow with
 orange
 stripes



STM, LF, FR, RM/ZOME + (4)
 ROOT

278

MUTIFRAXAR

Mecoua

Tree 25m x 30 cm dbh
 Bark grey & brown, flaking
 +++ & fissured
 u/bk red, c. 8mm thick
 Flower 40mm dia white
 'Fruit' green, 16mm dia
 - sticky exudate.

TBR: , TW, LF, FR (4)

279

EBENACEAE

Diospyros.

Tree 20m x 20cm dbh
 Bark grey, rough with fine
 longitudinal fissures
 u/bark orange, 5mm thick
 wood yellowish-orange

Fruit flattened spheroid,
 80 mm dia, orange
 on brown velvety disk/calyx.
 Seed with purplish gelatinous
 coat.

TBHT, TW, LF, FR. (4)

280 BURSERACEAE

Tree 3.5m x 40 cm dbh

Bark silver-grey, scales
 ubk orange 5 mm thick
 wood white

Flower, (13) C3, white
 fragrant

TBHT, TW, LF, FR (4)

281

RUBIACEAE

Woody climber, stem 40 mm dia
to 20 m on 280.
Fruit, orange brown

TW, LF, STEM (BK + WOOD)
FR (4/3)

282

ELAEOCARPACEAE

Elaeocarpus

Tree 35 m x 70 cm dbh
Trunk buttressed to 2 m
fluted to 4 m
o/Bark reddish brown
reticulate fissure
inner/bark red } 15 mm
under/bark yellow }

many small punctate (red)
flower 4 mm long

TBHT, TW, LF, FL (4)

12 SEP 1987

283 ROSACEAE

Parastemon

Tree 30 m x 30 cm dbh
 d/Bark grey, flaking.
 u/bark red, 4 mm thick

Fruit obovoid, 8 mm dia.
 green, Flowers greenish-white
 with yellow disk 2-3 mm dia.

TBK, TW, LF, FR (4)

TILIACEAE

284 ~~STERCULIACEAE~~ (PHOTO)*Stroemia javanica*

Tree 35 m x 60 cm dbh
 buttressed to 3 m

Bark reddish brown smooth
 slightly tuberculate, ± fissured
 u/bk orange, 5 mm thick

Fruit ovoid 75 x 55 mm,
reddish-orange, firm
endocarp pink seed orange

PHOTO

TBK, TW, LF, FR (4)

285

APOCYNACEAE

Tabernaemontana

Tree 10 m x 20 cm dbh

Bark light brown, rough

scaly & fissured

copious white latex

u/bark pale orange, 10 mm.

Flower bud 20 mm long

orange (PHOTO)

Fruit spheroid 130 mm dia

orange

mesocarp orange endocarp red

TBK, TW, LF, FR (4)

286

BURSERACEAE

Tree 15m x 25cm dbh

outer bark soft, corky, flaking

inner bark smooth, dark brown

w/bark orangy red 4mm thick

wood white

Fruit, oblong, 30 x 20mm
orange coloured with white
latex

TBT, TW, LF, (FR) (4)

287

DIPTEROCARPACEAE

Vatica

Tree 20m x 25cm dbh

Bark silver-gray with fine

lentic cracks, w/bk orange-brown

wood yellowish

Fruit, rugose, 1.5cm 5 partite

35mm dia.

Flower yellow (15) C & yellow

TBHK, TW, FR, LF. (4)

288 ANNONACEAE

Polgalthea.

Tree 25 m x 25 dbh

Bark reddish brown and grey.
fine powder scabrid.

ulb light orange 10 mm

Flower P6 green, 40 mm dia

Fruit vs black, spheroid

25 mm dia 4-6 per
axis.

TBHK, TW, LF, (3)

289

CELASTRACEAE

Bhesa paniculata

Tree 20 m x 30 dbh

of Bark light brown, smooth
or finely tuberculate. 1mm thick
inner bark orange, u/bark
yellow.

Flowers on spikes 1-2mm diam
yellowish green

TBT, TW, LF (3)

19 SEP. 1987

Garrison's mucky rd, North bank
of Sungai Tutuh about 1km
NW. New Base Camp.

Disturbed Alluvial forest,
wet, clay soil.

4° 00' N 114° 50'

(just outside park boundary)

290

Bourneraceae

Dacryodes

Tree 15m x 35 dbh

Bark reddish brown ± smooth

6mm thick, wood white

u/bark reddish

Fruit, green with purple tinge

25 x 12 mm with yellowish

green (?) glands

white latex from tinge

TBK, TW, LF FR (4)

291*

MORACEAE

Ficus:

Epiphytic climber on 290

Inflorescence minute white
axillary, no stem on base

HERB

sessile

292

POLYGAZACEAE

Xanthophyllum

Tree 10m x 30cm dbh

Bark light grey, thin (3-4mm)
'stringy' ± tuberculateFruit spherical, 15mm dia
green with rusty brown
faintFlowers, minute, 1mm dia
green

TBK, TW, LF, FR (4)

293

MYRISTICACEAE

Gynacantha cf. contracta

Tree 20m x 35cm dbh
reddish brown, slightly flaking, 15mm
u/bk orange, reddish exudateFruit, axillary, greenish
with orangey 'faint', oval 15mm

TBK, TW, LF, FR (4)

294

LAMNACEAE

Eusideroxylon

Bihar Malanganyan

Tree 20m x 60cm dbh

Bark dark brown, flaky + + +
6mm thick, w/bark orange
wood orange-red, v. hard, denseFruit ellipsoid 90 x 60 mm
glabrous, green, hard.

TBRT Tw, LF, FR (4)

295

DIPTEROCARPACEAE

Shorea

Tree 25m x 80cm dbh

Trunk buttressed to 2 m

Bark reddish brown, flaky
with many light brown corky
peeling

Lenticles c 3 mm dia, 20 mm thick
 w/bark red, pith white
 inner bark blood red.

Flower — creamy-yellow, fl 5-6 mm
 long, C yellow 6-10 mm long

TBK, Tw, LF, FL (4)

296 EUPHORBIACEAE

Bumcalendron

Tree 15 m x 25 cm dbh

Bark brown, ± smooth with
 some fine longitudinal furrows & flutings
 w/bk ^{some fine} ^{darker} red, 8 mm thick
 wood white

Fruit spheroid, green
 (distylar), 2 lobes, c. 30 mm
 dia

TBK, Tw, LF, FR, (4)

297

EUPHORBIACEAE

Aparosa

Tree 15 m x 30 cm dbh
 lower trunk gnarled.

Bark reddish-brown ±
 stringy or powdery
 5 mm thick
 u/bk reddish orange

Flowers, yellowish green
 minute 1-2 mm dia P 4

TBR, TW, LF, FL (4)

298

ANNONACEAE

Polyalthia

Tree 25 m x 60 cm dbh
 trunk fluted to 125 m

Bark brown smooth 10 mm
 u/bk orange with yellow

Fruit *agrostoides*, *Albizia*
 , ovoid, 25mm long
 bright red.

TBK, TW, LF, FR (4)

299 STANNICACEAE

Nephelium

Tree 20m x 45cm dbh
 trunk with buttress roots
 to 0.5m - 1m

Bark finely tuberculate
 dark reddish brown 5mm thick
 wk. orange red.

Fruit immature c 10mm
 dia, pale green

TBK, TW, LF, FR (4)

20 SEP

Undisturbed Alluvial Forest


300

Goniostylaceae

Goniostylus

Tree 20 m x 40 cm dbh

Bark, dark red, soft
corky with longitudinal fissures
c. 12 mm thick, u/bk orangy
yellow, wood white

Cymae  with
young fruits
P(5) green, fleshy, 8 mm dia
A yellow.

TBK, TW, LF, FL + FR

(4)

301

MELIACEAE

Amorosa

Tree 25m x 55 cm dbh

Bark light grey-brown
slightly flaky with longitudinal
lines of raised lenticels
10 mm thick u/bk reddish
with white latex; wood redFruit G(3), nuts brown
famine, spheroid 55 mm diam
white latex

TOT, TW, LF, FR (4)

302

CELESTRACEAE

Lophopetalum

Tree 20m x 50 cm dbh

Trunk fluted at base to 2m

Bark greyish-brown ± smooth
inner bark yellowish 8 mm

W/ bark orange.

K+C

Flower orange with yellow
membranous border to C lobe
10 mm dia, disk, darker orange
+ anthers

musk fragrance

TBK, TW, LF, FL. (4)

303

BURSERACEAE

Canarium ?

Tree 30m x 60cm dbh

Trunk buttressed to 1m

Bark reddish-brown,
tuberulate with raised
reticulate patterns, 12 mm th.

W/ bark orange, wood red.

Fruit ellipsoid green

TBK, TW, LF, FR (4)

304

SAPOTACEAE

Palagium

Tree 30m x 60cm dbh
 dbh 4m at base, to 2m
 Bark ^{brown} rough, corky ^{large} flaking
 w/ bark red, white latex
 15-20mm thick

Fruit immature

TBK, TW, LF, FR (4)

21 SEPT

200 m E of New base
camp

305

PANDANACEAE

2-3 m high sparsely
 branched crown of leaves

Prop roots to 30 cm

Shrubs at base, stem grey

2.5 cm dia

30 SEPT 1987

MATANG (proposed) NAT PARK

A. Bawang, SE Ridge

C. Serapi summit NNE

Sub Montane forest

on yellow podsol.

sandstone & shales bedrock

2500 ft

1° 32' N 110° 12' E

306 Pandanaceae
(2500')

Pandanus ?

Terrestrial c. 1 m tall.

under leaves, glaucous green
upper dark green

Fruits immature to 4 cm
long

Herbarium spec

307

THEACEAE

Gracilaria / Scheeria

Tree 10 m x 15 cm dbh

Bark rough, ^{soft} corky, flaking
reddish 12 mm thick
u/bark thin, yellowish
o/wood yellow

Flower, C umbels 20-25 mm
dia creamy white A so
yellow filaments
slightly sticky

Frut (1 only) hard
reddish-brown capsule, few pilose
hairs 15 mm dia, 5 length
shiny

TBT → TW. LF (3)

308

MYRTACEAE

Tristania anomala

Tree 8 m - 10 m x 50 cm
Bark coarse stringy flaking
< 5 mm thick, reddish brown
w/ bk yellowish

Flowers greenish
small 1-2 mm
on fl stalk with reddish

- brass toner ton.

TBK , TW , LF (3)

309

CELESTRACEAE
Lophopetalum

Tree 12 m x 40cm dbh

Bark silver-grey (flaking
20mm thick , } pitted
u/bark red.Flower , C5 greenish -
white 10mm dia , stam
A inserted on large (5mm
dia) perigynous disc

TBK TW LF. (3)

310

IXORANTHACEAE

Ixoranthes

Tree 12 x 30cm dbh

Trunk fluted at base to 1m

Bark dark, reddish-brown

10mm thick, rough with
longitudinal reticulate fissures
under bark reddish, of wood white

Fruit, dehiscent, woody

5 valved capsule 25mm

long with persistent calyx

reddish-brown colour

TBK, TW, LF (3)

311

ULMACEAE

Gironiera

Tree 10 m x 20 cm dbh

Bark light brown, thin
(4 mm) + smooth, slightly
powdery surface
Wbk yellow

Fruit ovoid, orange, 2 stylar

TBA, TW, LF, FR (4)

312

EUPHORBIACEAE

Glochidion

Tree 8 m x 15 cm dbh

Bark reddish brown, slightly

flaking 10 mm thick
Wbk red

Flower P 3+3 greenish.
white, with pink tinge
6 mm dia.

TBK, TW, LF, (3)

313 LEGUMINOSAE

Ormosia

Slender treelet 5 m
x 10 cm dbh

Bark finely dissected by cracks
with large (c. 5 mm dia)
wooly lenticels brown,
up bark orange-red, thin
< 5 mm. Twigs with tomentum

fruit brown, tomentose
capsule (part) irregular
dehiscent in 2 valves.
to 3-4 cm long

TBK, TW, LF, (3)

[7+1]
22

1 OCT 1987

31, 250 m NW of coll between
 Cr. Bawang and Cr. Serapi
 Slope, with S.W. aspect.
 2200', (near camp.)
 Upper M.D.F.

314

THEACEAE

Admanandra

Tree 8m x 15cm dbh
 of Bark reddish brown and grey
 with many prominent, lenticled
 5mm thick, whitish
 inner bark red, under bark
 yellowish

Flower buds imbricate
 conical, 'spiculate', white

TBH, TW, LF (3)

Col between G Serapi &
G Bawang, SW aspect
edge of clearing 2,200'

315 SAURAUACEAE

Saurauia

Tree 7m x 18 cm dbh.

Bark green h.
n grey with reddish
tinto ± smooth with lentic
mic of lenticels.

Fruit spheroid, green
tri-lobed style & persistent
calyx H₂, 10 mm dia
borne on old stem

TBR, LF, TW, FR
(4)

316

THEMOCRAE

Adiantum cordifolium

Tree 12 m x 30 cm dbh

Bark reddish-brown, (corky
outer) prominent lenticels
inner bark ^{dark} red, 20 mm thick
w/bark woody-red.Fruit spheroid, 15 mm
persistent, green, style & calyx
, 15 mm dia

+ Flower buds & flower

25 mm dia. C5 imbricate &

TBK, TW, LF, FR+FL.

* woody, off-white colour (4)

A flattened, reddish, brittle

~

S. side of col

steep gully

2,200'

S. aspect

317

FLACOURTIACEAE

Hydrocaryus

Tree 20m x 45 cm dbh
 Trunk fluted / buttressed to 1m
 Bark grey-brown, slightly
 rough

Fruit spherical - 30 cm dia
 green grey with reddish orange
 rough area

TBA, TW, FR, LF (4)
 on slope S. aspect

318

DIPTEROCARPACEAE

Vatica

Tree 25m x 30cm dbh
 Bark ± smooth, grey to
 patches of flaking orange-red
 green
 - grey outer bark
 inner bark orange-red

u/bark yellow. 10mm thick
 wood yellowish - white.

Fruit 5 merous, spheroid,
 15mm dia, scaly orangey
 brown surface

(TRT, LF, TW, FR 14)

Flowers minute (c. 1mm dia).
 greenish or reddish peduncle

319

MELIACRAR

Bysoxylin

Tree 25m x 50cm dia.

Trunk bitressed to 2m

Bark greenish-grey, roughy
 pitted.

u/bark whitish with orange
 streaks 15mm thick
 wood yellowish

Fruits 4 mer. spheroid
10cm dia, bright orange
colored

TBA, TW, LF, FR (4)

PHOTO

320 LAURACEAE
? *Cryptocarya*

Tree 20m x 50cm dbh

Trunk buttressed to 3m

Bark grey, soft corky
outer layer, 15mm thick.
u/bark reddish.

Flowers, in bud 2mm dia
greenish white panicles.

TBA, TW, LF (3)

Fruit obovoid, green

48mm long x 30mm dia

321

LAURACEAE

cf. Phoebe

Tree 20 m x 40 cm dbh

Bark silver-gray, flaking

10 m - thick

w/ bark reddish pink
- sticky exudateFlower, small greenish white
buds (2 mm dia) on waxy
white peduncles

TBK, TW LR FL (4)

322

LORANTHACEAE

Loranthus?

Parasitic on large tree

Flowers red C with long
ie 50 mm dia

narrow processed, 3 HT
long (cf C) narrow orange
remains linear lobes.
Style 20-25mm long red.
peduncle orange

Tw, LF, FL. (4)

STM (BARK + WOOD)

2 OCT 1987

Disturbed upper MDF
2150', near road
NW of coll between
G Bawang & G Serapi.

323

SONNIPATIACEAE

Duraburra moluccana

Tree 12m x 15cm dbh

Bark silver-grey with
lenticels (~8mm wide) reddish
u/bark reddish tintFruit in ^{of} umbel, IT4
persistent, style 40mm
long

TBK, TW, LF, FR (4)

324

LOGANIACEAE

*Fagraea*Shrub, 4m x
stem 5cm dia, grey

Flower C(5) ^{sakuriform} _{corolla}
recurved 60 mm dia
tube 40 mm long, white

LF + FK, TW, STM (BT + W)
(3)

325

RUTACEAE

Eucalia

Tree 8 m x 10 cm dbh

Bark light-brown with
longitudinal ridges and
cracks.
u/bark reddish

Fruit, m 4's green, spherical
2-3 mm dia

LF, FBT, TW, (FR)
(3-4)

2000'

326

RUBIACEAE

Naucloua

Tree 10 m x 25 cm dbh.
 Bark reddish-brown with
 transverse indiges of lenticels
 u/bk reddish 8 mm thick
 Flower, 80 mm diam
 globose, yellowish green,
 fragrant, PHOTO

TBK., TW., LF., FL (4)

327

LOGANIACEAE

Fagraea racemosa

Tree 8 m x 7 cm dbh.

Bark grey with raised
 longitudinal warty lenticels
 Young twigs ~ 50 mm
 glaucous

Flower campanulate
tube 40 mm, C lobes
35 mm dia, white, waxy
racemose (PHOTO)

Fruit ovoid, 15 mm dia
green with white glands.

TBR, TW, LF, FL+FR.
(4)

328

TMEACETAE SL

Ploiarum

Shrub - disturbed place,
roadside, 1,500'

4m.

Fruit reddish 5-ribbed
capsule, opening 5 loc. base
TW, LF, FR+FL, ST Bot (4)

coltd. Flower C 5' white
 with pink markings from bud
 A so , 30 mm dia

or

14 OCT 1987

Bau: Bidi, 3 km
SSW of Bau township
Steep, rocky limestone cliffs / pmr. loc
W aspect } ± metamorphosed.

Alt. 500'

Lat $1^{\circ}22' N$ long. $110^{\circ} 7' E$

329

LOGANIACEAE

Fagracea

Tree / shrub 3m⁻⁴ x 10cm
dbh; growing out of
crack in cliff

Bark grey with raised
lentels
u/bk yellow

Fruit green, glabrous
with apiculate apex
35 mm dia, sticky exocarp

FR, TW, STM BK, LF, (4)

330 ANACARDIACEAE

Gluta / ~~Melanoschyla~~

Tree 10 m x 20 cm dbh
 Bark reddish brown with
 large horizontal grooves 5 mm thick
 , up/bk reddish

Flower, C5, pubescent
 white with yellow center
 12-14 mm dia, recurved.

? TOXIC / IRRITANT.

TBK, TW, LF, FL (4)

331 OCHNACEAE 850'

Gomphia

Tree 8 m x 20 cm dbh

Bark 10 cm, flaking
w/bk bright yellow

Fruit 5-merous ^{lobed} partly
fused (5) perianth
style persistent 12 mm dia
yellowish green → bluish black
in fleshy receptacle
TBK, TW, LF (3)

332

SIPO-TACKITE

650-ft

Palaguan

Tree 10 m x 25 cm dbh

Trunk buttressed to 1.5 m
canopy

Bark grey-brown, flaking
w/bk red, with white
latex exudate, 10 mm thick

Fruit round, orange
up to 20 mm dia
persistent HT 343

TBT , LF , T-1 ,

FR

(-4)

333

MELIACEAE

500'

Aglia

Tree 8m x 25cm dbh

Bark ± smooth, reddish-brown, w/bark red.

Lenticles in perimeter
of most red small fls
in axils of leaf scars old wood

TBT , TW , LF (3)

15 OCT 1987

Jambusan 2-3 km SE
of Bani

Limestone cliffs & pinnacles
W aspect, 250 ft

334 MELIACEAE

Chrosolobon

Tree 8m x 30 cm dbh

Bark brown, polished
with small lenticles

u/bk yellowish

Flower cantharous, red
Fruit obovoid, apiculate
green with reddish tint

to 30 mm dia

TBH, TW, LF (3)

335 ANACARDIACEAE 300'

Melanorrhoea

Tree 12m x 30cm dbh

Bark brown with pseudo
lenticle to 5mm dia
u/bark orange; 8mm thickFlower green 1mm dia
in bud white latexTBH, TW, LF, FL (4)
Rangoon Toxic HERITAGE

— base of stem:

336 RUBIACEAE 200'

Nauclea

Tree 15m x 45cm dbh
Trunk fluted to 1m

Bark reddish-brown, flaking
patches; u/bark yellow.

Inflorescence globose 30-35 cm
axis fls yellow style
pedicel 10 mm, fragrant

TBK, TW, LF, FL (4)

337

ANACARDIACEAE

200'

Pentaspador

Tree 18m x 40cm dbh

Bark reddish brown
± smooth, u/bk yellow.

10 mm thick

Fruit oval, pointed apex
green with reddish-brown
spots 30-35 mm long

TBK, TW, LF, FR (4)

338^{*}

PANDANACEAE

250'

Pandanus

2-3 m tall, sparsely
branched from base
leaves almost to ground
level

HERB ONLY

339

ANNONACEAE

200'

Cyathocalyx

Tree 7m x 20cm dbh
dark

Bark brown ± smooth,
w/bk orange, 8mm thick

Flower green, C glabrous
up to 6.5mm long, irregular
apex

Fr ovoid, pointed, 14 Seeded
brown, glabrous 30mm long
TBK, LF, TW, (3)

340

SAPINDACEAE

Dioscorea

Tree 15 m x 35 cm dbh

Bark brown with small
(1-2 mm) reddish lenticels
slightly rough

7 mm thick i/bk orange

flowers on spike, yellowish
green, 2-3 mm dia

TBK, TW, LF (3)

(403)

17 OCT

Swamp forest 3 km SSW
 of Lundu, near Batang
 Kayan River 20'
 1° 33' N 109° 51' E

34) GUTTIFERAE

Calophyllum

Tree 20 m x 40 cm dbh
 Trunk with prop-roots to
 1.5 m

Bark reddish brown, soft
 corky, flaking 1/2 bark

8 mm thick reddish, sticky &
 exudate yellow

Flower white reflexed petals
 15 mm dia. A∞ prominent
 yellow whorl, fragrant.

TBK, TW, LF, FL(4)

342

MYRTACEAE

Myrtica

Tree 20m x 30cm dbh

Bark grey-brown with
 longitudinal ridges, inner
 bark red, w/bark orange.
 4mm thick

Flower, in bud, green
 to brown from bud
 scales and stem

TBT, TW, LF, FL (4)

343

ICACINACEAE

Stemonurus

Tree 15m x 25cm dbh

Bark grey, longitudinal

N. 3

grooves & tuberculate
6mm thick, u/bk orange

Flower, reduced, yellow tubes
~~with~~ 5mm long with
5 feathery stigmas
↳ bigone A

Fruit, banana shaped
4.5mm long green,

TBT, TW, LF, FL (4)

344

EUPHORBIACEAE

Baccauria breitenbr.

Tree 10m x 15cm dbh

Bark, red-brown thin
(≤ 5 mm) flaking.

u/bk red

DAYLIND CORP
MA. WA. 1982

Revised by
J. S. BURTON

Flowers minute (2 mm dia),
in fascicles 5-6 enclosed in bracts
yellowish green

TBXI, TW, LF (3)

(418)

18 OCT 87

4 km S Lundu.

345

CRUTTIFERAE

Mesua

Tree 18 m x 25 cm dbh

Prop roots to 1 m

Bark grey with fissured
cracks and grooves 5 mm thick
if bark orange.

Fruit 2 lobed, scarious
reddish brown, 10 mm dia
style persistent

TBXI, TW, LF (3)

346

OXALIDIACEAE

Woody climber, stem 6 cm
dia.

Flowers on axillary spike
old wood c. 1.5 cm dia green
with dark red top.

STM (BK + WO), TW, LF (3)

347

ANNONACEAE

Desmuss

Woody climber, stem 2-3 cm
dia.

Fruit c 6 free carpels on
10 mm long stalk, purplish
with glaucous bloom

STM (BK + WOOD), TW, LF, FR?)
(3-4)

348

SAPOTACEAE

Payaman.

Tree 8 m x 15 cm dbh

Bark brown & grey, tuberculate
4 mm thick
u/bk orange, white latexFruit, in axillary
in fasciclesK 4 persistent; style, 10 mm,
purplish, persistent, fr.

ovoid, green 5 mm dia

TBK, TW, LF (3)

349

APOCYNACEAE

(8)

Willoughbia

Woody climber, stem 2 cm
white latex

Flower, saffron, tube
7 mm, yellow.

Fruit (?) 2 locules, 9 cm
long x 3 cm dia green
& yellow.

LF, + TW + STM (BT + WD) (1)

350

LINACEAE

Ctenolophon parvifolius

Litoh

Tree 20m x 25cm dbh

Bark brown with toment.

juvenc 1.5 dbh orange 6 mm

Fruit, ellipsoid, pyxis
with persistent 2 lobed
style persistent, 15 mm
long

TBK, TW, LF (100) 3

DAR. N.C. CORP
14 PMA, WA 9822

Revised by
1974

351

GUTTIFERA

Calophyllum

Tree 8 m x 15 cm dbh

Bark light brown with
dark brown longitudinal rows
of lenticels
inner/bk red w/bk orangeFruit globose c 10 mm diam
green with persistent style

TBR, TUV, LF, (FR) (3)

352

FAGACEAE

Lithocarpus

Tree 15 m x 25 cm dbh

Bark grey with reticulate
grooves
w/bk red, 4 mm thick

Flower mounts on axillary
spikes

TBK, TW, LF (3)

353 ICACINACEAE

? *Gonocaryum* / *Gomphandra*

Tree 25 m x 40 cm dbh

Trunk fluted to 2 m

Bark gray with fine longitudinal
cracks & ± scabrid. 6 mm
thick, w/bk orange

Fruit orangy-pink oblong
20 mm x 8 mm

TBK, TW, LF, FR (4)

(434)

19 OCT 1987

Serayan area ; 10 km

S of Sematan

1° 44' N 109° 45' E

20'

Kerangas forest on white
sand

354

MYRTACEAE

Whiteodendron

Tree 1.8 m x 45 cm dbh

o/Bark silver-gray, peeling.
inner bark brown

w/bark orange, soft, stringy.

5 mm thick

Fruit ovoid-conical 6-7 mm dia
n, style red,

K(s) persistent,

Flower C(5), white, waxy

30 mm dia

TBK, LF, TW, FR. (4)

355

DIPTEROCARPACEAE

Hopea

Tree 15m x 20cm dbh

Bark mottled grey & brown
slightly rugose

u/bk yellow 4mm thick

Flowers minute 1-2 mm dia
green with reddish tints.

TBK, TW, LF (3)

356

LORANTHACEAE

? Loranthus / Macrosolen

Woody climber, parasitic
on Vatica sp. (Diptera)

Fl. or enclosed in bright red tugged
bracts, yellow base
fl. orange-red tube 15mm
log C(6)

TW, LF, FL, STM (BT + WD)
(4)

357

FAGACEAE

Lithocarpus

Tree 12m x 13cm dbh

Bark grey with longitudinal
& reticulate grooves

359

GUTTIFERAE

Macoua

Tree 18m x 25cm dbh.

Bark yellowish-brown
flaking, upk orange

8mm thick

Fruit 2 lobed, scarious
(scaly, pink) rusty -
brown, 2.5cm dia.

22) TBHT, TW, LF, FR (4)

360

ANNONACEAE

Tree 13m x 15cm dbh

Bark brown with fine
longitudinal cracks

Flower

K3 ~~green~~ 3-4 mm diaC3 green, ^{hirsute} lobes 10-15
mm long, irregular

TBH, TW, LF. (3)

361

SAPOTACEAE

Palagueria

Tree 18 m x 25 cm dbh
darkBark reddish brown, soft
deep longitudinal fissures,
peeling, in

w/bk pinky-red,

white latex exudate

Fruit obovoid, green

15 mm dia

TBH, TW, LF, FR (4)

(463-2)

L. L. DARLING CORP
TACOMA, WA 98421

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